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**UNITED STATES PATENT AND TRADEMARK OFFICE**

**BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Kapeles  
Appl. Serial No.: 10/674,047  
Filed: 09/29/2003  
For: Frangible Non-Lethal Projectile  
Art Unit: 3641  
Examiner: Clement

**APPELLANT'S REPLY BRIEF**

**(1) Status of Claims:**

Claims 1, 3, 6-10, 12 and 13 are withdrawn.

Claims 2, 4, 5, 11, 15, 17, 24 and 31 are canceled.

Claims 14, 16, 18-23, 25-30 and 32 are rejected and are on appeal.

**(2) Grounds of Rejection to be Reviewed on Appeal:**

I. Whether claims 14, 16, 18-23 and 25-30 are unpatentable under 35 U.S.C. 103(a) over Barr et al. (US Patent No. 3,911,824) and Klein (US Patent Application Publication No. 2004/0069177).

II. Whether claims 27 and 32 are unpatentable under 35 U.S.C. 103(a) over Barr (US Patent No. 3,865,038), Barr et al. (US Patent No. 3,911,824) and Klein (US Patent Application Publication No. 2004/0069177).

**(3) Argument:**

**I. Whether claims 14, 16, 18-23 and 25-30 are unpatentable under 35 U.S.C. 103(a) over Barr et al. (US Patent No. 3,911,824) and Klein (US Patent Application Publication No. 2004/0069177).**

Appellant provides the following supplemental arguments in reply to the Examiner's Answer, while maintaining the previously filed arguments and asserting that the rejections are not well-founded under the teaching-suggestion-motivation test or under the newer *KSR* "common sense" standards as recently set forth by the Supreme Court.

The Examiner has provided an annotated set of drawings from the Barr et al. patent, wherein she has associated in word form the claimed structures of the application to the drawn components of the Barr et al. device. It is submitted that this demonstrates how the Examiner is improperly rejecting the claims at hand. In the Examiner's Answer and on the drawings, the Examiner states that the combination of elements 31 and 41 in Barr et al. is the equivalent to the claimed "projectile base" and that the combination element 51 in Barr et al. is the equivalent to the claimed "projectile nose". It is further submitted that the Examiner fails to understand the structure and functionality of the elements in the Barr et al. device.

Element 41 of Barr et al. is an "obturating pusher disc" (col. 2, line 4) and elements 31 are three sections of a "segmented sabot" (col. 2, lines 3-4). Element 51 of Barr et al. is a "projectile" (col. 2, line 2). The Barr et al. device has "a projectile 51 carried ... by a segmented sabot 31, 31, 31 with an obturating pusher disc 41 engaging the rear face of the sabot 31, 31, 31 (col. 2, lines 2-5 - emphasis added). The "obturating pusher disc 41 and segmented sabot 31, 31,

31 are formed of low density material ... to minimize secondary projectile dangers from the parts 41, 31, 31, 31 after ejection from the weapon barrel and separation thereof from the projectile by wind drag thereon (col. 2, lines 46-52 - emphasis added). In muskets of hundreds of years ago, wadding was placed behind the musket ball - the wadding pushing the ball out of the firearm. No one in the art would consider the wadding ejected from the firearm to be the projectile. In many modern weapons, the shell casing is automatically ejected from the firearm. No one in the art would consider the shell casing to be the projectile.

By definition, a sabot is “a bushing or similar device fitted around or in back of a projectile, as to make it fit the bore of the gun barrel or launching tube.” *Webster’s New World College Dictionary*, 4<sup>th</sup> ed., 2002. The sabot separates from the projectile after they exit the rifle barrel. Thus, the sabot cannot form any part of the “projectile”, which in Barr et al. is expressly set forth to be element 51 and is composed of “a base housing 55 and a generally ogive shaped nose section 53” (col. 3, lines 24-26). The sabot 31 is essential as an additional element distinct from the projectile 51 in the Barr et al. device because the projectile 51 is composed of a “relatively soft ... elastic material such as natural or synthetic rubber” (col. 3, lines 24-29).

When comparing the projectile of Barr et al. with the claim language or modifying the projectile of Barr et al. with the teachings of the Klein and Barr patents, it is not proper to ignore the precise definitions of the projectile components given by Barr et al. (i.e., base housing 55 and nose section 53) and it is not proper to now define the obturating pusher disc 41 and the sabot segments 31 to be the “projectile base” of the claims. To all skilled in the art, the obturating pusher disc 41 and the sabot segments 31 of Barr et al. would not be considered a projectile, i.e., the object propelled into contact with the target, since the purpose of the obturating pusher disc is to push forward a projectile and the purpose of the sabot is to contain a projectile within the

barrel. A pusher disc is used with a projectile and a sabot is used with a projectile. The “projectile nose” of the claims must be compared to the Barr et al. “projectile nose 53” of “projectile 51”, and the “projectile base” of the claims must be compared to the Barr et al. “base housing 55” of “projectile 51”. There is no other common sense interpretation or application of the disclosure of Barr et al.

Even under the new *KSR* standards it is necessary for the Examiner to articulate an adequate rationale for combining the prior art to attain the claimed invention. As more clearly set forth in the Appeal Brief, there is no rationale given or imaginable here. Under the Examiner’s position, the person of ordinary skill in the art would be required to completely ignore the meaning and function of a sabot and pusher disc in relation to a projectile. Even if this was somehow acceptable, one of ordinary skill in the art would not have reasonably combined the teachings of the cited prior art to produce the invention at hand but for the use of hindsight from Appellant’s own disclosure.

The Examiner states that a “term used in an application or reference is irrelevant when the structure disclosed is the same as the claimed structure”. This is not the case here, and this rationale is incorrect. Certain nouns have precisely understood meanings within a given art. The term “projectile” is such a term in this case. The applicant, the Barr et al. reference (“projectile 51”), the Klein reference (“universal projectile ammunition 10”) and the Barr reference (“projectile 11”) all use the term “projectile” because it clearly and precisely defines a particular element in the art. The Examiner now attempts to ignore the fact that the inventor and the inventors of the cited patents all know what a projectile is and instead attempts to substitute a convoluted combination of elements. To provide a simple analogy, the term “hammer” defines an object in the hand tool art that has a striking head attached to an elongated handle. Anyone

with minimal knowledge or skill in the art knows precisely what structures these terms define. Simply because one can open a desk stapler and drive a nail with it does not make the stapler body a striking head and the stapler base a handle, such that a desk stapler is the equivalent of a hammer.

It is respectfully submitted that the independent claims are patentable on the basis of the above arguments, and therefore all the dependent claims are also allowable. It is respectfully submitted that the claims as presented are patentable, on the basis of the above remarks, and reconsideration and subsequent passage for allowance is hereby requested.

**II. Whether claims 27 and 32 are unpatentable under 35 U.S.C. 103(a) over Barr (US Patent No. 3,865,038), Barr et al. (US Patent No. 3,911,824) and Klein (US Patent Application Publication No. 2004/0069177).**

The reply arguments set forth in Section I above are repeated verbatim below in reference to the Examiner's rejection of independent claim 27 and dependent claim 32:

Appellant provides the following supplemental arguments in reply to the Examiner's Answer, while maintaining the previously filed arguments and asserting that the rejections are not well-founded under the teaching-suggestion-motivation test or under the newer *KSR* "common sense" standards as recently set forth by the Supreme Court.

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of the sabot is to contain the projectile within the barrel. A pusher disc is used with a projectile and a sabot is used with a projectile. The “projectile nose” of the claims must be compared to the Barr et al. “projectile nose 53” of “projectile 51”, and the “projectile base” of the claims must be compared to the Barr et al. “base housing 55” of “projectile 51”. There is no other common sense interpretation or application of the disclosure of Barr et al.

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### **III. Response to the Examiner's Statement that the Brief is Deficient.**

In Section (5) of the Examiner's Answer, the Examiner states "[t]he brief is deficient because Appellant states that independent Claims 14 and 27 contain means plus function language, however the language of claims 14 and 27 does not fall under the scope of § 112, sixth paragraph because the language of the claims does not meet the 3-prong analysis under MPEP 2181." The Examiner provides no explanation or rationale for this conclusion, and this issue has not previously been raised.

The language of § 112, sixth paragraph reads:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The 3-prong analysis of MPEP 2181 reads:

- (A) the claim limitations must use the phrase "means for" or "step for";
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material or acts for achieving the specified function

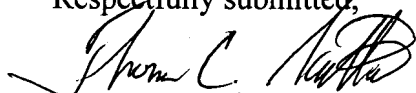
Claim 14 reads (in pertinent part) "... propulsion means to separate said projectile from said propulsion shell ..." and claim 27 reads (in pertinent part) "...propulsion means to separate said projectile from said propulsion shell ...". Thus, in both claims there is present (A) the phrase "means to" (which is the equivalent of "means for"), and the "means to" phrase is (B)

modified by functional language (i.e., "separate") and is (C) not modified by sufficient structure, material or acts for achieving the specified function. Therefore the brief is not deficient.

Furthermore, the Examiner fails to include a statement explaining the reasons why such a claim limitation is not to be treated under 35 U.S.C. 112, sixth paragraph, as required by the guidelines in MPEP 2181

For the reasons set forth above, it is respectfully requested that the appeal be maintained and that the final rejection of the claims at issue be reversed in whole, and that the claims be passed for allowance and issue.

Respectfully submitted,



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Date



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